



# **Table of Contents**

1. Introduction	3
1.1. Frequently Asked Questions	3
2. Summary	5
3. Genetic Results	7
3.1. What information is included in the results?	7
3.2. Your genetics results	8



## 1. Introduction

People's different talents and personalities are shaped by a multitude of factors. All our experiences, and all kinds of environmental factors, combine to forge our personalities.

Many scientific studies, however, have linked our genetics to predispositions to certain personality traits.

In this report we apply certain prestigious genetic studies to your genetic information, and explain the conclusions. The information extracted from these studies should not be misinterpreted as dictating one's destiny. Rather, it indicates predispositions that may or may not be realised, affected by a whole set of remaining factors, which, in the case of personality, tend to be the most important.

As is common in our studies, on the first pages you will find a summary, with icons, of each of the traits analysed, which we cover more extensively in the following pages.

These reports may vary over time in accordance with the progress of scientific research in the field of Genetics. New mutations are continually being discovered, such that the ones we are analysing today will be better understood tomorrow. At 24Genetics we make a great effort to apply new and consolidated scientific discoveries to our reports.

We remind you that you should consult with your doctor before making any health-related changes. The results of this report are personal, and not applicable to studies on other members of your family.

At 24Genetics we encourage our clients to complement their genetic test with a genetic consultation session, and always proceed based on the guidance of a medical specialist.

This report is not valid for clinical or diagnostic use.

## 1.1. Frequently Asked Questions

#### Should I make drastic changes to my health management based on the data in this test?

No. Any changes you make to your health management should be reviewed and approved by an expert geneticist or medical specialist. If you have any questions about the genetic test, consult with a healthcare expert in genetic diagnosis.

#### Does it all depend on my genes?

No at all. Your body responds to many different factors. Our genes are certainly an important parameter, but lifestyle, exercise, diet, and many other circumstances also affect the body. Knowing yourself well will enable you to treat your body in the most appropriate way. And this is what these genetic reports are all about: more information.



#### Are all the genes analysed listed in the sections?

We include only a sample of the genes we analyse. Some of the sections are defined by the analysis of genes that we do not show in the report. Our algorithms combine all your genotypes from the markers analysed.

#### What is this report based on?

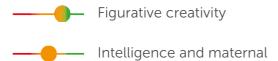
This test is based on different genetic studies that have been internationally verified and accepted by the scientific community. There are some databases where studies are published only when there exists a certain level of consensus. Our genetic tests are carried out by applying these studies to our clients' genotypes. In each section you will see some of the studies on which they are based. There are sections where more studies are used than those listed.

The information provided in this report is valid only for research, information and educational uses. It is not valid for clinical or diagnostic use.



# 2. Summary

#### **Talent**



breastfeeding

\_\_\_\_\_\_ Longevity

# Spelling and lecture comprehension

Cognitive ability in the elderly

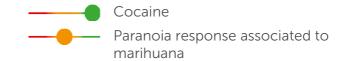
## Personality





#### Other





#### Caption:

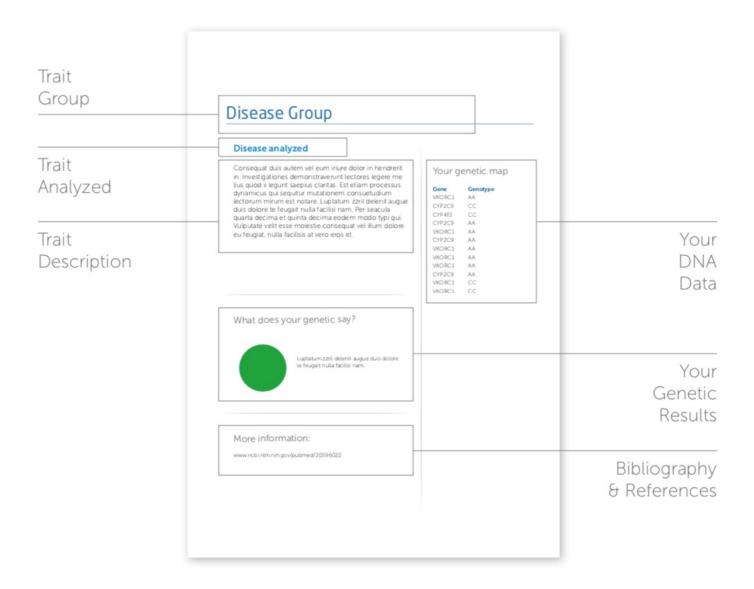
- Your analyzed genotype is favorable.
  - ——— Your analyzed genotype is a little favorable.
- ——— Your analyzed genotype doesn't particularly affect you.
- Your analyzed genotype is a little unfavorable.
- Your analyzed genotype is unfavorable.





## 3. Genetic Results

## 3.1. How to understand your report?



## 3.2. Your genetic results



## Figurative creativity

Creativity refers to the ability to invent or create something. It is closely related to human development and achievement, both individually and socially. The COMT gene and its function as a dopamine transmitter have long been researched as a contributor to creativity.

## Your genetic map

**Gene Genotype** COMT AG

What do your genetics tell us?



Based on your genotype, your genetic propensity to have figurative creative skills is high.



## Spelling and lecture comprehension

Some alterations hamper learning to read or write, such as dyslexia, with a prevalence of 5% -10% in school-age children. Reading disability is a complex trait determined mainly by genetic factors. One of the genes with a transcendent role is KIAA0319, as it has been correlated with reading comprehension.

## Your genetic map

Gene Genotype
KIAA0319 AG

## What do your genetics tell us?



Based on your genotype, you are at a genetic risking of low reading and spelling performance. Other genetic and clinical factors may also have an effect.



#### Intelligence and maternal breastfeeding

Breast milk contains essential hormones, enzymes, and antibodies. Higher concentrations of specific enzymes from breast milk during lactation, in combination with specific genetic variants, have been associated with improved cognitive development. This correlation is emphasised in specific genetic profiles. New scientific studies relate the benefits of breastfeeding for the regulatory function of the FADS2 gene in IQ development.

#### Your genetic map

Gene Genotype
FADS2 AG

What do your genetics tell us?\_\_\_\_\_



Based on your genotype, the likelihood of breastfeeding affecting your IQ is average.



#### Cognitive ability in the elderly

Cognitive abilities are affected when we reach old age, but not everyone is affected in the same way. The catechol-0-methyltransferase (COMT) gene encodes an enzyme that degrades dopamine in the prefrontal cortex. Genetic studies have investigated the relationship between individual differences in the COMT gene and cognitive performance in senescence.

#### Your genetic map

Gene	Genotype
KL	AC
KL	GG
COMT	AG

What do your genetics tell us?



Based on your genotype, your genetic propensity to develop cognitive abilities (episodic and working memory in the elderly) is high. Other genetic and clinical factors may also have an effect.



#### Longevity

Genetic studies on twin brothers have shown that approximately 25% of overall variation in human life expectancy can be attributed to genetic factors, which become more relevant as of the age of 60. The TAS2R4 gene has been correlated with life expectancy.

## Your genetic map

Gene Genotype

TAS2R4 TT

What do your genetics tell us?



Your genotype features a genetic predisposition towards increased longevity. In any case, longevity depends on many other factures besides genetics.



#### **Impulsivity**

Impulsivity is the predisposition to react unexpectedly, quickly, and disproportionately to an external situation that may be threatening, or to an internal stimulus specific to the individual, without prior reflection or taking into account the consequences that one's actions might have. Variants of the DBH gene related to dopamine metabolism seem to influence impulsivity.

#### Your genetic map

Gene Genotype

DBH CC

What do your genetics tell us?



Based on your genotype, you do not have a propensity towards impulsive personality traits. Other genetic and clinical factors may also have an effect.



#### **Night person**

The body's internal biological clock controls behaviour and physiological processes occurring in 24-hour cycles, such as the sleep-wake cycle. Numerous genes regulate one's circadian rhythm. One of them, CLOCK, has been associated with a preference for early or late-night behaviour.

#### Your genetic map

Gene	Genotype
CLOCK	AG
PER3	GC

What do your genetics tell us?



Based on your genotype, you are genetically prone to being a night owl.



#### **Neuroticism**

The serotonergic system plays a vital role in various physiological functions and regulates complex functions related to cognition and emotions. Neuroticism, or emotional instability, is a psychological profile defined by a personality exhibiting emotional instability and insecurity, high rates of anxiety, a continuous state of worry and tension, and a tendency towards guilt. It is generally linked to psychosomatic symptomatology. Genetic studies have shed light on this aspect, and today it is known how the 5-HT1A gene influences this psychological trait.

## Your genetic map

Gene	Genotype
HTR1A	CC
DBH	CC

What do your genetics tell us?



Based on your genotype, your genetic propensity to develop neuroticisim is normal. Other genetic and clinical factors may also have an effect.



#### **Seasonality**

Circadian rhythms are the approximate 24-hour oscillations in behavioural or physiological processes that allow organisms to anticipate routine environmental changes and prepare to adapt. Variants in genes, like NPAS2, which control circadian rhythm, have been associated with seasonal changes in sleep duration, social activity, mood, weight, appetite, and energy level.

#### Your genetic map

AG

Gene Genotype

NPAS2

What do your genetics tell us?



Based on your genotype, you are not genetically prone to developing seasonal variation in your moods (also related to appetite, social activity and weight)



#### **Alcohol**

Alcohol is one of the most frequently addictive substances in the world, causing physical and psychological dependence. According to the World Health Organization alcohol abuse is behind more than 3.3 million deaths a year worldwide. Geneticists have been researching genes that influence its addictive component for decades. Genes such as OPRM1 or ADLH2 are related to ethanol dependence in animal and human models.

#### Your genetic map

Gene	Genotype
ALDH2	GG
OPRM1	AA
CNR1	TC
PDYN	TT
BDNF	CC
ADH1B	CC
ANKK1	AA

What do your genetics tell us?



Based on your genotype, your risk of genetic propensity towards alcoholism is normal. However, other genetic and clinical factors can also influence habits.



#### Cocaine

Dependence on this substance is characterised by compulsive searching XXX and continued use, despite the negative consequences. Dependents are at high risk of relapse from heavy use, even after a period of abstinence. The Cannabinoid Receptor 1 (CNR1) gene has emerged as a promising genetic marker of this dependence.

#### Your genetic map

Gene	Genotype
CNR1	TT
CNR1	TC

What do your genetics tell us?



Your genotype is not genetically associated with cocaine dependence. However, it is necessary to bear in mind that other genetic and clinical factors can also influence addictions.



#### **Opium**

The dopaminergic system is known to mediate in the reward and reinforcement effects of drugs. The variants in the genes of the dopamine system are potential sources of a better understanding of the mechanisms of addiction. Also, genetic association studies have found variants in dopaminergic genes associated with opium dependence.

## Your genetic map

Gene Genotype
DRD2 CC

What do your genetics tell us?



Based on your genotype, you are not at increased risk of opium dependence. However, other genetic and clinical factors can also influence addictions.



## Paranoia response associated to marihuana

Numerous studies have concluded that daily cannabis smoking increases a person's risk of developing a psychotic disorder. The factors influencing this are still being researched. Recent genetic studies have shown that genes such as AKT1 are involved in the interaction between cannabis and these disorders.

## Your genetic map

Gene Genotype
AKT1 TC

What do your genetics tell us?



Based on your genotype, your genetic propensity towards cannabisassociated psychosis is average. Other genetic and clinical factors may also have an effect.

# 24Genetics

24Genetics Europe HQ Paseo de la Castellana, 95 Planta 15 A Madrid 28046 Spain +34 910 059 099 24Genetics USA HQ 100 Cambridge St. 14th Floor Boston MA 02114 Massachusetts - US +1 (617) 861-2586

UK Cambridge +44 1223 931143 24Genetics México Torre Magenta Paseo de la Reforma, 284 Planta 17 Colonia Juárez Ciudad de México 06600 México +52 (55) 9171 2060